

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)
2. (Currently Amended) The piezoelectric actuator as claimed in claim 1, characterized in that 16, wherein the piezo stack (3) comprises piezoelectric ceramic.
3. (Currently Amended) The piezoelectric actuator as claimed in claim 1, characterized in that 16, wherein the actuator top (5a) and the actuator bottom (5b) are arranged equidistant from each other.
4. (Currently Amended) The piezoelectric actuator as claimed in claim 1, characterized in that 16, wherein the material of the housing shell (4) is at least largely resistant to the ~~medium~~ media flowing around it, ~~in particular fuel~~.
5. (Currently Amended) The piezoelectric actuator as claimed in claim 1, characterized in that 16, wherein the inside volume of the actuator housing is at least largely substantially gas-free.

6. (Currently Amended) The piezoelectric actuator as claimed in claim
~~1, characterized in that the 16, wherein~~ viscosity of the isolating medium (3)
corresponds approximately to viscosity that of the medium flowing around
flowing media.

7. (Currently Amended) The piezoelectric actuator as claimed in claim
~~1, characterized in that 16, wherein~~ the material of the housing shell (4) is
electrically neutral.

8. (Currently Amended) The piezoelectric actuator as claimed in claim
~~1, characterized in that 16, wherein~~ the actuator top (5a) and the actuator
bottom (5b) have a different cross-sectional area.

9. (Currently Amended) The piezoelectric actuator as claimed in claim
~~1, characterized in that 16, wherein~~ the isolating material (3) is a silicone oil.

10. (Currently Amended) The piezoelectric actuator as claimed in claim
~~1, characterized in that the 16, wherein~~ thermal conductivity of the isolating
material (3) is equal to or greater than that thermal conductivity of the material
of the piezo stack (1).

11. (Currently Amended) The piezoelectric actuator as claimed in claim
~~1, characterized in that 16, wherein at least one of~~ the actuator top (5a) and/or the

actuator bottom (5b) have a cross-sectional area which respectively corresponds to the assigned active surface of the piezo stack (1), arranged transversely to the main direction of extent of the piezo stack (1).

12. (Currently Amended) The piezoelectric actuator as claimed in claim 1, characterized in that 16, wherein at least one of the actuator top (5a) and/or the actuator bottom (5b) have at least two terminating regions, electrically insulated from each other, for the electrical connecting lines (2) of the piezo stack (1).

13. (Currently Amended) The use of a piezoelectric actuator as claimed in claim 1 or 16 for an injection valve, in particular of an internal combustion engine, preferably a gasoline or diesel engine.

14. (Currently Amended) The use of a piezoelectric actuator as claimed in claim 1 or 16 for a proportional valve.

15. (Currently Amended) The use of a piezoelectric actuator as claimed in claim 1 or 16 for a sonotrode.

16. (New) A piezoelectric actuator for insertion in a flowing media, comprising:

a piezo stack having a top active main surface and a bottom active main surface;

deformable isolating material in direct contact with at least portions of said piezo stack;

actuator housing enclosing said isolating material, said housing having a housing shell and a dimensionally stable actuator top arranged on the top active main surface of the piezo stack and dimensionally stable actuator bottom arranged on said bottom active main surface of the piezo stack;

electrical connection lines extending from said piezo stack through said actuator housing by means of at least one of said dimensionally stable actuator top and actuator bottom wherein said housing shell is disposed at a distance from piezo stack at all pointer, and a length of the housing shell, when measured along a surface line, corresponds to at least a maximum extend of the piezo stack or the housing shell is able to be stretched to the maximum extent of the piezo stack, wherein the isolating material is one of an electrically insulating fluid and gel, wherein an inside volume of the housing is substantially filled with said isolating material, and wherein the housing shell and the dimensionally stable actuator bottom and the dimensionally stable actuator top are connected to each other in a sealed manner with respect to the isolating material and the flowing media.

17. (New) The piezoelectric actuator as claimed in claim 5, wherein the media is fuel.

18. (New) The piezoelectric actuator as claimed in claim 13, wherein
the internal combustion engine is one of a gasoline and diesel engine.